

In the Claims:

AI
1. (Currently Amended) An Internet protocol network alternate routing system comprising an extension telephone, a plurality of networks ~~provided with~~ including one Internet protocol network for transmitting voice signals from said extension telephone, and an exchange for controlling ~~connections~~ a connection between said extension telephone and said plurality of networks;

wherein said exchange, upon detecting a state of congestion over a first link of said Internet protocol network, automatically switches ~~a the Internet protocol network~~ that is connected with said extension telephone to a second network, said second network being other than said Internet protocol network; and

an announcement trunk for reporting switching of said signal path to said extension telephone when the Internet protocol network determined by said alternate routing control unit is in a congested state.

2. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 1, wherein said exchange comprises:

a plurality of signal paths for connecting said plurality of networks with said extension telephone;

an alternate routing control unit for determining which one network among said plurality of networks ~~a network that is~~ to be connected as said second network with said extension telephone;

a call control unit for establishing a second link between ~~a the second network~~ that has been determined by said alternate routing control unit and said extension telephone;

a traffic control unit for detecting a congested state ~~of congestion of a~~ said Internet protocol network for which ~~a said first link~~ has been established by said call control unit; and

a switch control unit for controlling ~~a said connection~~ between said extension telephone and a signal path among said plurality of signal paths that is connected to ~~a the~~ second network, based on detection results in said traffic control unit.

3. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 2, wherein said exchange comprises:

a voice converter that, when a said first link has been established with a partner node by said call control unit and voice signals are transmitted from said extension telephone by way of said switch control unit, converts the transmitted voice signals to packets, assigns port numbers to each of the packet voice signals, and outputs the voice signals as outputted voice signals;

wherein said traffic control unit adds Internet protocol addresses that are outputted from said call control unit to said outputted voice signals outputted from said voice converter to generate and output Internet protocol packets as outputted Internet protocol packets;

and said exchange further comprises:

an RTP (Real-time Transport Protocol) unit for adding RTP headers to said outputted Internet protocol packets outputted from said traffic control unit and outputting the header-added Internet protocol packets; and

a network driver for transmitting on said Internet protocol network said header-added Internet protocol packets ~~to which RTP headers have been added and that have been outputted~~ from said RTP unit.

4. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 3, wherein:

said RTP unit, in a case in which Internet protocol packets to which RTP headers have been added are transmitted from said Internet protocol network, removes the RTP headers and outputs Internet protocol packets to said traffic control unit;

said traffic control unit converts Internet protocol addresses contained in Internet protocol packets that are outputted from said RTP unit to port numbers of ports in said voice converter, and outputs each of Internet protocol packets that are assigned by port in said voice converter to a respective port in said voice converter; and

said voice converter converts Internet protocol packets that are outputted from said traffic control unit to voice signals, reconfigures converted voice signals, and transmits to said extension telephone by way of said switch control unit.

5. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 2 wherein:

said traffic control unit detects a packet loss rate that is contained in a sender report packet that is transmitted from said Internet protocol network and notifies said call control unit that said packet loss rate has exceeded a predetermined set value if said packet loss rate exceeds the predetermined set value; and

said call control unit is provided with a counter in which a count value is incremented with each notification from said traffic control unit that said packet loss rate has exceeded a the predetermined set value, and ~~{said call control unit}~~ said call control unit does not establish a link between said Internet protocol network and said extension telephone if the count value exceeds a the predetermined set value.

6. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 3 wherein:

said traffic control unit detects a packet loss rate that is contained in a sender report packet that is transmitted from said Internet protocol network and notifies said call control unit that said packet loss rate has exceeded a predetermined set value if said packet loss rate exceeds the predetermined set value; and

said call control unit is provided with a counter in which a count value is incremented with each notification from said traffic control unit that said packet loss rate has exceeded a the predetermined set value, and ~~{said call control unit}~~ said call control unit does not establish a link between said Internet protocol network and said extension telephone if the count value exceeds a the predetermined set value.

7. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 4 wherein:

said traffic control unit detects a packet loss rate that is contained in a sender report packet that is transmitted from said Internet protocol network and notifies said call control unit that said packet loss rate has exceeded a predetermined set value if said packet loss rate exceeds the set value; and

said call control unit is provided with a counter in which a count value is incremented with each notification from said traffic control unit that said packet loss rate has exceeded a set value, and ~~{said call control unit}~~ said call control unit does not establish a link between said Internet protocol network and said extension telephone if the count value exceeds a predetermined set value.

8. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 5 wherein the packet loss rate in said sender report packet is variable.

9. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 6 wherein the packet loss rate in said sender report packet is variable.

10. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 7 wherein the packet loss rate in said sender report packet is variable.

11. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 2 wherein said switch control unit can be manually switched.

12. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 3 wherein said switch control unit can be manually switched.

13. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 4 wherein said switch control unit can be manually switched.

14. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 5 wherein said switch control unit can be manually switched.

15. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 6 wherein said switch control unit can be manually switched.

16. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 7 wherein said switch control unit can be manually switched.

17. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 8 wherein said switch control unit can be manually switched.

18. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 9 wherein said switch control unit can be manually switched.

19. (Currently Amended) ~~An~~ The Internet protocol network alternate routing system according to claim 10 wherein said switch control unit can be manually switched.

20-28. (Cancelled)